



MYRMECIA

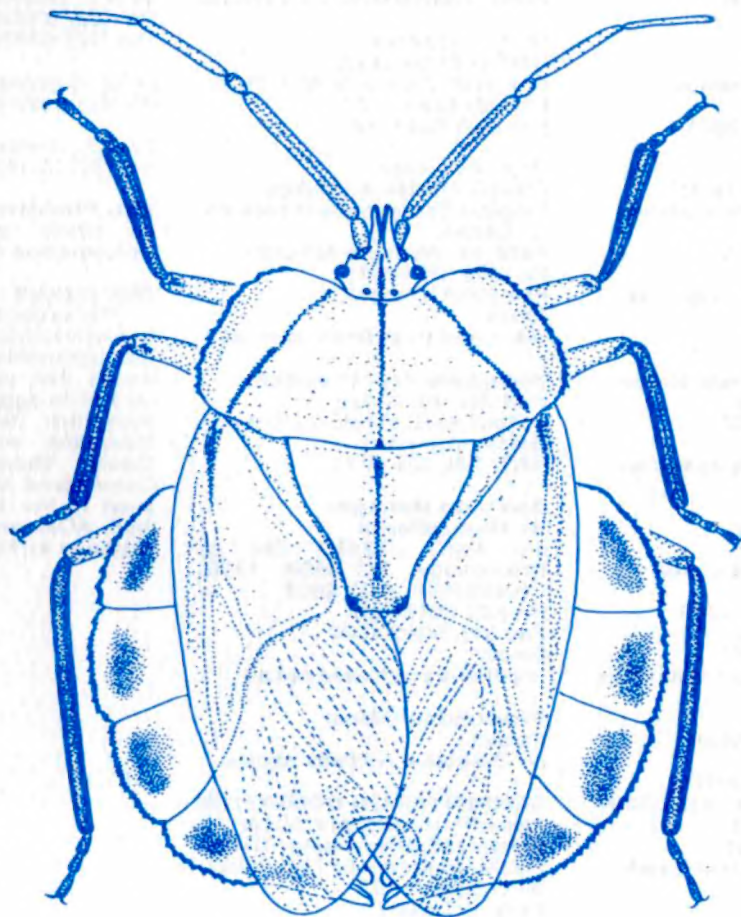


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ex officio members of the
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THE COVER

The cover depicts *Peltocopta crassiventris* (Hemiptera: Tesseratomidae), a beautiful insect that provides maternal care of its eggs and nymphs for their first two instars. The illustration was prepared by **Geoff Thompson** of the Queensland Museum and was used in the logo for the 29th AES AGM and Conference in Brisbane in 1998.



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REPORTS

4th International Hymenopterists Conference - Canberra, 6-11 January, 1999

One hundred and twenty seven entomologists working on wasps, bees and ants came to Canberra from 26 countries for the 4th International Hymenopterists Conference, held at ANU. There were 76 papers and 43 posters presented in four symposia and sessions of contributed papers. **Jo Cardale** was the main local organiser, with assistance from **Gary Gibson** (Agriculture Canada, on sabbatical in ANIC) and **Glynn Maynard** (AQIS); **Andy Austin** coordinated the scientific program with assistance from **Otto Schmidt**, **Mike Keller** and **John Jennings** (all from the University of Adelaide). **Ian Naumann**



4th International Hymenopterists Conference. TOP: Andy Austin (S.Aust.), Penny Gullan (ACT) and Pete Cranston (ACT); BOTTOM: Gimme Walter (Qld), John Macdonald (NSW) and Vladimir Gokhman (Russia) [Photos: John Jennings]



John Macdonald (NSW), Bruce and Jodie Campbell (USA) and Jean-Ives and Ann Rasplus (France) [Photo: John Jennings]

and **Paul Dangerfield** had assisted in some of the early pre-conference organising.

The symposia were:

Host-Parasitoid Interactions (organisers, **Otto Schmidt**, University of Adelaide, and **Brad Vinson**, Texas A & M University)

Biological Control (organiser, **Paul DeBarro**)

Tracing Evolutionary Transitions with Molecular Phylogenetics (organiser, **Mark Dowton**, University of Wollongong)

Evolution of the Chalcidoidea (organiser, **John LaSalle**, CABI Biosciences).

Jim Cullen formally welcomed the participants to Canberra and **Peter Cranston** and **Penny Gullan** provided assistance with local arrangements, earning Honorary Hymenopterist T-shirts during the conference dinner.

Edgar Riek received a warm welcome at the dinner as old friends enjoyed a chat with him and hymenopterists who had long known his work, had a chance to meet him.

Jo CARDALE
CSIRO, Canberra

Asian Paper Wasp recorded from Australia

A specimen of *Polistes* from Newtown, Sydney, was sent by the Australian Museum to ANIC for identification late in 1998 (collected Oct. 1998). Dr **Jun-ichi Kojima**, an authority on Vespidae, while visiting the ANIC after the 4th International Hymenopterists Conference, has identified it as *Polistes chinensis antennalis* (Perez). The native range is Japan, Korea and Mongolia; the species became established in New Zealand in 1979 and work on its biology has been published using the common name, Asian paper wasp.

New Zealand has no native Vespidae but an Australian species, *P. humilis humilis* (Fabricius), was introduced about the 1880s. Interestingly, research in New Zealand in 1996 has shown no change in its distribution since the arrival of the second species. *P. humilis* is the common *Polistes* in the Sydney area.

A check of the ANIC collection showed one specimen of *P. chinensis antennalis* from Sydney University, March 1993; the collection also holds a specimen from Norfolk Island, May 1985 - researchers from New Zealand had previously

noted that it had arrived there by 1992, probably from Auckland.

This is the second Northern Hemisphere species of *Polistes* to become established in Australia. *Polistes dominulus* (Christ) was widespread in the Perth area by 1977. Both these introduced species are black and yellow, rather than the brown/orange/yellow of the native species.

Jo CARDALE
CSIRO, Canberra

REGIONAL NEWS

AUSTRALIAN CAPITAL TERRITORY

CSIRO Entomology

During November **Ebbe Nielsen** participated in both the ABRS Fauna Committee meetings and the ABRS Client Survey and workshop in preparation for the ABRS Advisory Committee meeting in early December. He has chaired his last meeting as Chair of Invertebrate Taxonomy (the new Chair is **Mark Harvey**) but will continue to be involved with the Australian Journals of Scientific Research (AJSR) since he has been appointed to CSIRO's chair on the AJSR Board. Ebbe was in Washington, DC, 6-9 December for the first segment of the Science Review of the National Museum of Natural History and in Copenhagen, 10-15 December, for the meeting of the Major Systematic Facility Group.

Volunteers **Ludy Burger** and **Nigel Dears** are doing a wonderful job sorting through the array of unmounted and unlabelled material and making it available for study. ANU graduate student **You Ning Su** has benefited by receiving some important additional records of his dwarf crickets, *Bobilla* species.

Bob Lewis continues to sort through his grasshopper and locust photographic material and has much of it catalogued and available for a proposed grasshopper book. Several sections are now in manuscript form. Field work on the South Coast has revealed a number of interesting insects but neither nymphs nor adults of *Tympanophora uvarovi* have been discovered at the boundary of the southern range limit of the species (vicinity of Burrill Lake). This leads **David Rentz** to conclude that records of adult males from the locality are not indicative of a resident population but are merely 'superfluous' males extending beyond the breeding

range of the species.

Work is continuing to tighten up Volume 3 of the Monograph of Australian Tettigoniidae. In addition to the re-writing, measurements and analysis of the many sound recordings are occupying a great amount of time. Dave is fortunate to have the contributed services of **You Ning Su** who is helping on the latter chores. Most of the plates need to be assembled, mounted and the figures interpolated into the text. As a by-product of the Burmese experience, it appears that one of the students will commence thesis work on the biology of the burrowing crickets of the study area. Dave continues mounting and labelling the catch at home as time permits. The haul of 'other groups' will soon start to flow on to the appropriate curators.

Steven Shattuck was in Leiden, London and Copenhagen 9-14 December to demonstrate BioLink. The 4th International Hymenopterists Conference was held between 6-11 January 1999 in Canberra. The local organising committee was **Ian Naumann, Jo Cardale, Glynn Maynard, and Penny Gullan**. The scientific organisers were **Andy Austin, Otto Schmidt, and Mike Keller**.

Jo Cardale has been very busy dealing with the paperwork for the 4th IHS Conference. There were over 120 registrants from 24 countries.

A warm welcome to **Stefan Schmidt** who took up his position as a Hymenoptera post-doc on 14 December. Stefan has been appointed to work on whitefly parasitoids in **Paul DeBarro's** project. Previously, he worked on Pergidae (Symphyta) at the Department of Entomology, University of Queensland, with **Gimme Walter**.

A barbeque to thank our ANIC Volunteers was held on the 8 December; 8 volunteers 16 ANIC staff plus Chief, **Jim Cullen**, and **Rob Floyd** enjoyed a relaxed lunch hour. Jim Cullen thanked all present for their efforts during this the first year of the scheme.

Don Warner has spent the last couple of weeks performing a major purge of the ANIC storeroom, ably advised by **Tom Weir** and **Murray Upton**. The aim is to gradually free the collection halls of much of the accumulated clutter which presents a potential harbour for a host of unwanted predators. **Kim Pullen** is just starting to feel the brunt of the European Wasp season. The telephone filter is providing some relief but Kim still spends a considerable amount of time giving advice to all manner of clients. Of course, other identifications

continue to arrive with AQIS contracted material providing quite a challenge not only to Kim but to the other ANIC staff involved in giving their expert opinion. **Helen Tongway** has now returned to her normal schedule of activities after an intensive period recurating the longicorn beetles. **Ted Edwards** appeared on 'Burke's Backyard' TV program to explain that bogong moths will not eat your woollens - the fan mail has started. Ted also explained the biology of bogong moths in a series of radio interviews in country NSW, Sydney and Canberra. Ted and **Hari Sutrisno** once again returned from a successful field trip. After completing the Tineidae, **Vanna Rangsi** has now started curating the larentiine Geometridae. **Michael Braby** and **Murray Upton** are in the final phase of editing the two-volume butterfly book. **Ian Common's** third oecophorine volume is nearing completion with the manuscript due to be handed to the publishers by end of February. **Marianne Horak** has been awarded a three-year ABRS grant. After completing the Butterfly Zoological Catalogue, **Leane Regan** will become involved in an ACIAR-funded revision of the Oriental *Hypsipyla* species starting mid-1999. **Marcus Matthews'** heliothine manuscript is finished.

Tom Weir has been busy with bioprospecting over the last few weeks, with a field trip, preparations and identifications taking up a good part of the time. He has also just gained access to a large number of gerromorph specimens from the Australian Museum. These have been collected throughout NSW by various museum surveys and number many thousands of specimens. The locality data will greatly enhance those previously available for NSW and will be used in the veliid paper currently being prepared.

Thrips field work this month involved brief visits to Lake Gillies and Mootwingee but the brevity was not correlated with the excitement. Excellent collections were made from three species of *Acacia* trees including good biological data on a new semi-social species that is currently 'in press'. And returning on the bitumen road 30km north of Broken Hill **Laurence Mound** had his first experience with an Australian flash flood but two hours later the water level had fallen to a navigable depth and he paddled on.

Bench research facilities have been greatly enhanced this month through collaborative investment with **Peter Cranston** of our various project funds. We now share a new JVC video

camera and image enhancement software operated through Laurence's big new computer - and the results are quite stunning. The objective is not just to illustrate routine descriptive taxonomic papers with eye-catching pictures of thrips; the main reason for the investment is the production of further LucID keys, illustrated with high quality photomicrographs (using both stereo and phase contrast microscopy).

Ray Ackhurst reports that **Charani Ranasinghe** has joined his Bt project as a post-doctoral fellow to identify new insecticidal proteins. Prior to taking up this position Charani did a PhD on cytochrome P450s related to pyrethroid resistance in *Helicoverpa armigera* under the supervision of **Andrew Hobbs**, University of Western Australia. **Richard Milner** spent New Year in Adelaide attending the International Congress of IUSI where he gave a paper on the use of *Metarhizium* conidial preparations for killing termite colonies. Meanwhile, back in Canberra, Richard's group is continuing large scale field trials with *Metarhizium* for control of locusts and grasshoppers. Recent trials have been against migratory locust near Emerald (Queensland) and in the Cooma district against wingless grasshopper. These trials involve collaboration with Qld DNR and the APLC while **Graeme Baker** (ex NSW Agriculture) is assisting with the wingless trials.

'Psocid Man' **David Rees** has been busy establishing a nation-wide trapping system for psocids in the mainland grain storage system. Watch this space for more detections of new species as the program progresses. David has **Bradley Brown** (formerly at Indooroopilly) working for him in the laboratory and **Noel Starick** in the field. Noel is a former professional Apiarist, has had a long-term interest in the Lepidoptera and started collecting insects when he was six years old. Nowadays he is frequently seen visiting the ANIC.

Peter Annis reports that he is continuing to work on general models for the toxicology of gaseous insecticides, specifically the factors that control the Concentration x time (Ct) effect. **Jonathan Banks** says that the APTC Proceedings have been published and distributed to all persons who attended the conference. Meanwhile, back in the orchard, Jonathan has been catching codling moths with UV light to check on the efficacy of pheromone induced mating disruption.

Jane Wright attended the 4th International

Hymenopterist's Conference here in Canberra and took time out to discuss matters of mutual interest with **Owain Edwards** (Floriante Park) who also attended the conference. **Johannes Steidle** (visiting scientist at SGRL) presented a paper on host acceptance by *Lariophagus* distinguished on Situations granaries at the Hymenopterist's Conference.

The Stored Grain Research Laboratory has provided two interesting photographs for this issue from a tour of grain and quarantine research institutes in China (see photos on this and facing page). The photos of underground grain storage facilities were taken at the Ma Ten Kong State Grain Depot (near Xian). One shows **Jane Wright** with two Chinese colleagues examining the inloading hatch on the top of the hill; the other shows Jane, **Gaye Weller**, and **Stephen Pratt** (all SGRL) outside the

outloading tunnel (at the bottom of the hill). These are huge underground silos, known as "bells", "teapots" or "horses hooves" depending on the design used. These silos are usually built into the side of a hill or adjacent to a ravine, which allows

grain to be loaded from ground level into the top of the silo and to be outloaded from the bottom at the lower ground level. The party had a rare opportunity to see one of these storages under construction.



Jane Wright is shown the input hatch at the Ma Ten Kong State Grain Depot, near Xian, China.

Australian Defence Force Academy University College The University of New South Wales

The main activity during 1998 was the installation of an Insect Monitoring Radar at Bourke, NSW. The radar commenced operation in May and continued running through to year's end (and beyond). **Alistair Drake**, **Ian Harman** and **Haikou Wang** have all travelled to Bourke a number of times during the year to upgrade or maintain the IMR, and to survey *Helicoverpa* and *Mythimna* larval populations (and their host plants) in surrounding areas. For some surveys we have been accompanied by collaborators **Peter Gregg** from University of New England and **David Hunter** from the Australian Plague Locust Commission. **Marie Yee** (then with UNE) participated in

the July survey which extended as far west as Noccundra, Qld. Heavy rains in spring produced copious hosts and larvae but confined travel to the bitumen.

Ian Harman visited the USA in November,



Stephen Pratt, a Chinese colleague, Jane Wright and Gaye Weller (SGRL) outside the outloading tunnel at the Ma Ten Kong State Grain Depot, near Xian, China.

giving talks at conferences in Albuquerque (American Meteorological Society) and Las Vegas (Entomological Society of America) on the IMR and the observations he has made with it in Queensland and Texas. Ian has also been working on his IMR data-analysis algorithms and his thesis. **Haikou Wang** spends two days a week at the Australian Plague Locust Commission, adapting GIS systems and databases for tracking *Helicoverpa* populations in the inland. He is also developing software for condensing and presenting the data now streaming in from Bourke. In September, **Alistair Drake** attended the joint AES/AAERC conferences in Brisbane, giving two talks and catching up with many former colleagues.

Entomological visitors during the year included **Don Reynolds** (NRI, UK), **Zhai Bao-Ping** (Nanjing Agricultural University), **Qu Xifeng** (Ministry of Agriculture, Beijing), **Roger Farrow** (independent), **Scott Ritchie** (Qld Dept of Health), and **Tomonori Watanabe** (temporarily UQ).

Marcus MATTHEWS
Regional Councillor

ANIC visitors during the IHS conference

Many of the participants in the International Hymenopterists Conference also visited the ANIC before or after the meeting to study the Hymenoptera collection. On Monday 11th January, CSIRO-ANIC-Hymenoptera was extremely crowded. Reception was kept busy getting

everyone signed in and selling books to many of the visitors. **Graham Crompton** escorted a large group of non-taxonomists around for a general look at the ANIC. **Jo Cardale** and **Stefan Schmidt** hosted at least twenty visitors in the wasp collection that morning - however, some went up Black Mountain to try collecting so the hall didn't actually burst at the seams. Downstairs, **Steve Shattuck** had his share of ant specialists. The following morning things settled down with only eight visitors at microscopes and during that week the Hymenoptera collection benefited hugely: several families were identified to genus or subfamily - altogether, these workers identified over 30,000 specimens! The families which received particular attention were Bethyliidae (**Celso Azevedo**, Brazil, c. 7,000 specimens), Braconidae (**Kees van Achterberg**, Netherlands, 56 drawers), Chalcididae (**Marcelo Tavares**, Brazil, c. 2,000 specimens), Ichneumonidae (**Ian Gauld**, UK, 15 drawers), Myrmecidae (**John Huber**, Canada, and **Serguei Triapitsyn**, California; c. 6,500 specimens) and Tiphiidae (**Lynn Kimsey**, California, 42 drawers with c. 7,000 specimens).

Jo CARDALE
ANIC, Canberra

NEW SOUTH WALES

Orange Agricultural Institute

Graham Thwaite visited the Huon Valley, Tasmania, in late January to take part in an apple field day arranged by **Paul Rapley** (Tasmania Department of Primary Industries, Water and Environment, New Town) and others. This excellent National Field Day was attended by several entomologists including **Richard Vickers** (CSIRO, Brisbane), **David Williams** (Agriculture Victoria), **Stephen Sexton** (Biocontrol Ltd, Brisbane) and local identity **Margaret Williams**.

Adrian Nicholas (Bathurst Agricultural Research Station) presented a Seminar at Orange on his work on the biological control of woolly aphid, an increasingly serious pest of apples. Adrian has documented the importance of earwigs in the control of the pest which he will submit for a PhD this year.

Agricultural Scientific Collections Unit

Darryl Webb, Waite Campus University of Adelaide, visited **Murray Fletcher** on Tuesday 12 January to discuss his work on leafhopper salivary

glands as an aid to identify insect vectors of phytoplasma diseases of plants. Darryl has been focussing on the pathogenic agent causing grapevine yellows disease in Australia.

John Macdonald attended the International Hymenopterist's Society (IHS) Congress held at the Australian National University in Canberra, 6-11 January 1999 and presented a joint poster on Pergidae.

Following the conference, **Nathan Schiff**, US Forestry Service (USDA), Mississippi, returned to Orange with John to examine the collections, collect and discuss Pergids and their biology.

Bruce Campbell, Research Leader, Plant Protection Research USDA, Albany California who also attended the IHS Congress, and his wife **Jodie Steffen-Campbell** visited the Unit on the 13-15 January. During his visit with ASCU staff at OAI, Bruce discussed his research on molecular phylogenetics of Auchenorrhyncha (leafhoppers and planthoppers) with **Murray Fletcher** and recent developments in Codling Moth attractants with **Graham Thwaite**. In addition, Bruce presented a seminar on aflatoxin contamination of tree nuts which was well attended by OAI staff. Bruce and Jodie were also rather taken by the models of native Australian animals found in Cadbury's Yowies.

Ken Walker dropped in for a surprise visit on 21 January to examine the collection facilities and look at native bees (give me some warning next time Ken and I'll make sure I'm here!)

Danuta Knihinicki presented her final MSc seminar to the School of Biological Sciences at Macquarie University on 18th November. Danuta's title was "The taxonomy and ecology of the Eriophyoidea (Acari) associated with native teatrees, *Melaleuca* species, in Australia". Danuta's work has concentrated on the melaleuca species used for essential oil production on the NSW North Coast. Danuta plans to have submitted her thesis by Easter with **Michael Priest**, our mycologist, due to have his PhD thesis submitted by the time this issue of *Myrmecia* is distributed. Between them, they will have significantly increased the level of formal qualifications in the Unit.

Macquarie University

Key Centre for Biodiversity and Bioresources

Graham Osler has been awarded a PhD for his thesis "Factors Contributing to the Structure of Soil

Mite Communities". Graham now has a postdoctoral appointment in **Lyn Abbot's** lab at UWA. **Aletha Cruse** has also been awarded her PhD for her thesis research on the control of microorganisms in termite mounds and she too has moved to WA where she is now studying lobsters. **Jim Mackintosh's** PhD research established for the first time (we think) that ants have immune systems. He has taken out a patent on an immuno-peptide from *Myrmecia gulosa*. Jim is also publishing a neat little experiment showing that male *M. gulosa*, which do not have metapleural glands, when raised in isolation from the workers who do, are rapidly infected by microorganisms. The males raised along with workers apparently benefit from the antimicrobials secreted by worker metapleural glands. **Helen Doherty** is continuing the antimicrobial research, most recently revealing interesting antimicrobial effects in the silk of a cave spider. **Peter Wilson** has started his Masters research examining the insects on Kurrajong trees in disturbed and undisturbed habitats.

The Key Centre hosted the Annual Meetings for the Society for Conservation Biology and was glad to see invertebrates and insects being seriously considered for conservation research and policy. The opening address by **Sir Robert May** emphasised the need for more research into insect conservation. **Andrew Beattie** and **Ian Oliver** attended the meetings of the International Union for the Study of Social Insects in Adelaide. **Ross Crozier** and **Andy** had organised a symposium on the Conservation of Social Insects, the first in the society's history. Ian presented a paper on the new digital imaging system that the Key Centre has developed under the trade mark BioTrack. The system is designed to handle large specimen-based projects by recording, storing and organising both images and data in a user-friendly way. BioTrack has been tested by a variety of agencies and is currently undergoing scrutiny by professional taxonomists. **Andy Austin** at the University of Adelaide has received images of scelionid wasps from Sturt National Park to see if he could identify them. After some adjustments by our imager, **David Britton**, he found that identification was relatively straight forward, even for these tiny specimens. The possibilities of identification from on-screen images and the benefits of virtual collections will most likely prove extremely useful.

Dinah Hales has taken early retirement but she will remain working in her lab as usual for the foreseeable future. My guess is that Dinah will experience a feeling of liberation being able to get on with her research, and some teaching, without the hassles of being on the academic staff. **Melinda Hillery** under the guidance of **Mark Dangerfield** and **Mark Stafford Smith** and **Graham Griffin** (CSIRO) is studying termite ecology in various habitats around Alice Springs. **Mark Dangerfield** also has extensive experiments set up at Macquarie to explore the role of millipedes in soil formation and nutrient cycling.

Dick Frankham and his group continue to use *Drosophila* for modelling conservation genetics and **Dave Briscoe** and **Noel Tait** are discovering more and more species of velvet worms (Onychophorans) wherever they look. **Alan York** and **Rebecca Harriss** are nearing the end of their project looking at the effects of cattle grazing on insect and spider communities in NSW NE forests. **Lesley Hughes** is well into her research examining the effects of climate change on herbivorous insects. Last but not least, the project to automate some aspects of identification involving **Andy Beattie** and Professor **Jim Piper** and **Peter Dekker** from Macquarie's Special Research Centre for Lasers and Applications has a prototype that successfully discriminates between a test group of mite species. In particular, it can identify pest and predatory mites used in biological control with every promise for very high speed discrimination and counting. Jim made us all laugh by admitting that he thought the instrument he had in mind would most likely process mites at the rate of "only several thousand per second"! Unfortunately the project now awaits a sponsor. Sound familiar?

Andy BEATTIE

Key Centre for Biodiversity and Bioresources
Macquarie University

State Forests of NSW

At present, the Forest Research and Development Division is undergoing major refurbishment and we are scattered throughout the Division while our laboratory and collection rooms are getting new walls, ceilings, floors, lighting etc. We will move back into our new quarters hopefully by the end of January.

Martin Horwood has joined us as a Research Officer. Martin left NSW Agriculture in 1996 ahead

of the closure of the Biological and Chemical Research Institute. He spent the next 2 years with AgrEvo working in technical development and registration before seeing the light and returning to the fold. He joins the timber preservation section headed by **David Gardner** and in December, he, David and the other section members (**John Marchant** and **Les Page**) traveled to Mejum State Forest near Narrandera to set up a trial to test some termiticidal timber treatments. The site is in a remote area and another trial established there was vandalised several years ago. Team members hope a new barbed-wire fence and some land-mine warning signs will do the trick and that the site is left unmolested while the trial is under way.

Bob Eldridge has moved to a higher plane – he is now the Manager, Plantation Technology, Forest and Timber Protection and has little time to spare for termites, or entomology generally, these days. **Russell Cant** left us last year for more lucrative pursuits. **Debbie Kent** and **Darren Waterson** are helping **Angus Carnegie** out in the Forest Health Survey Team.

Chris Ann URQUART
State Forests of NSW

NORTHERN TERRITORY

*There was movement at the station for the word
had reached our ears
That the bloke from the Museum was on his way,
And had joined the Ag Department; Graham
Young dissolved in tears,
"He's the dolt we'll all regret" was all he'd say.
There was Stuart Smith who made his name when
fruit flies ran amuck,
The old man had his hair turn white as snow,
And Haidee Brown and Lanni Zhang could not
believe their luck,
They had not expected such a fearful blow.*

*And Heather Wallace, Michael Neal, Pat Dolan
and the rest,
Said to their boss "That bloke will never do
For a long and tiring campaign to eradicate a pest
Such as thrips in mangoes out at Humpty Doo."
So he waited, sad and wistful, just Glenn Bellis
stood his mate,
"I think we ought to let him come" he stressed,
"I have seen him swing a sweep net and set out a*

*screw-worm bait,
And when it comes to malaise he's the best!"*

*"He hails from Sydney Harbour, by the bridge
that's not been burnt,
Where the ants are twice as big and sting like hell,
Where the mozzies land at airports and your
reputation's earnt,
Experience like that will surely tell."
So they halted, cowed and beaten, and said
"Come and join our team."
He was something like a dog who's tail is waggy,
Or a pig that's in a mud-hole, or the cat that got
the cream.
And that's how Graham Brown became an 'aggie'!
Anon, NT*

Entomology Branch NTDFIP

The branch heaved a collective sigh of relief when the Northern Territory was declared officially free of the philippines fruit fly, *Bactrocera philippinensis*, on the 30th of November. *B. philippinensis* was apparently introduced in fruit illegally imported from the Philippines. Adult males were first detected in the suburb of Karama in November 1997 and the last male was detected on the 26th of December 1997 but road blocks, baggage inspections, baiting and fruit collections continued for another 11 months. **Stuart Smith** spear-headed the eradication campaign. The eventual success of the campaign was due to the systematic approach and hard work put in by Stuart's team. **Mike Neal** is taking a well earned months leave after tidying up a few loose ends at the conclusion of the campaign, while Stuart headed off for a consultancy in Mauritius (fruit fly of course). **Graham Young** is Branch head in Stuart's absence and receives plenty of free advice from **Haidee Brown**. **Deanna Chin** is taking 12 months leave during 1999. **Magen Geyer**, originally employed on the fruit fly campaign, is continuing with the branch. Magen is working on *Mastotermes* baiting trials and IPM of fruit trees. **Lanni Zhang** is continuing work on bean fly parasites and spray trials for the control of bean fly in the Darwin rural.

Graham Brown has joined the branch after being transferred from the NT Museum. Initially, Graham will be making surveys of pests of field crops in the Douglas Daly and Katherine regions.

Quarantine Inspection Branch

To confirm the Berrimah Agricultural Research Farm's ability to attract entomologists like moths to a flame, **Ted Fenner** transferred to BARC in December. Ted still does the same job - he just does it from the rapidly developing centre of entomological excellence in NT.

Northern Australia Quarantine Strategy

The difficulties in monitoring for Asian Honeybees in mangroves has led **Glenn Bellis** to investigate the potential for using Rainbow Bee eaters to sample bee populations in hard to reach areas like mangroves. An all-points plea for assistance in finding roosting sites of the birds from which regurgitated pellets of indigestible bee bits can be collected and examined for remains of Asian bees has returned a good result. About 12 responses, including 2 detailed descriptions of rainbow lorikeet roosting sites, were received. Apparently more would have been forthcoming but the wording of the plea, designed to make it sound interesting to the layman, was a bit light hearted to be taken seriously by some people who thought it was an April Fool's joke.

Parks and Wildlife Commission of the NT Conservation Management Unit

Colin Wilson travelled with his project leader **Rachel McFadyen** (Queensland DNR) to the eastern Indonesian islands of Timor, Flores, Sumba, Lombok and, unavoidably, Bali in December. Colin released gall flies onto infestations of the weed *Chromolaena odorata* on some of the islands back in February, and this trip confirmed successful, if somewhat tenuous, establishment at all sites.

Medical Entomology Branch

The Branch's tireless efforts of salt marsh mosquito control paid off over the November/December period, with only 3 cases of confirmed Ross River virus disease recorded in the Darwin region. This was undoubtedly due to the extensive and repeated helicopter applications of Bti over the swamps near Darwin and the combined ground larval control operations with the Darwin City Council and Parks and Wildlife Commission. This reduction in disease was remarkable and was achieved despite the early and considerable rain and the extensive flooding and extremely large hatches of salt marsh mosquitoes.

There has been a large turnover of staff in the last twelve months and the staff situation is now stabilised with the appointment of **Dan Richards** and **Bernadette Haigh** as technical officers and **Andrea Wilson** as medical entomologist. Andrea replaces **Brian Montgomery** who left the Branch in December. She completed her honours in Darwin on the larval biology of *Aedes funereus* and she is a very welcome addition to the team. **Gwenda Hayes** has been off on maternity leave and had a girl (Natarsha) in November. Gwenda is managing to come in occasionally to continue the Branch integrated data base implementation which is starting to pay dividends in efficiency. **Jane Carter** is acting senior technical officer for the next nine months in Gwenda's absence and has been doing a magnificent job in keeping the technical aspects of the Branch programs running. **Martin Shivas** is completing the writing of his PhD and will be joining the branch in March to pursue further work on the biology of *Culicoides ornatus*. **Peter Whelan** is busy working out how to balance a budget when all the money for mosquito control has been spent! In between he is working with local AQIS officers on the implementation of **Richard Russell's** review of vector monitoring at first ports of call, the organisation of an extensive base line biting insect study of a new Defence training ground in the north west of the NT, advising on guidelines to prevent mosquitoes in the extractive industry and fighting a rearguard action on a review of the environmental health program of which the Medical Entomology branch is a part.

Glenn BELLIS
Regional Councillor

QUEENSLAND

Bureau of Sugar Experiment Stations

Les Robertson left BSES in October to take up a 4-year appointment with Sugar Research and Development Corporation as a Program Manager. He will still be based in northern Queensland, now at Innisfail, and will oversee the spending of the extra funds allocated by the federal government just before the last federal election. Most of the money will be spent on RD&E associated with high-priority issues such as canegrubs and low sugar levels. Les' replacement is **Mohamed Sallam** who has taken the position at Tully. Mohamed hails from Egypt and completed a PhD at the International Centre for Insect Physiology

and Ecology in Kenya.

BSES also lost the services of **Paul Timson-Farrell** from Mackay. Paul is off to join the army as an environmental health officer. A stint at Duntroon should be quite a change from the routine at BSES!

The compilation of pest risk analyses for 1286 exotic insects and mites associated with sugarcane prepared by **Peter Allsopp** and **Frances FitzGibbon** and **Paul DeBarro** (CSIRO) has been released on CD. The official launch of the CD was performed by Queensland's Minister for Primary Industries, **Henry Palaszczuk**, early in December.

Queensland Department of Primary Industries

Heliothis and holidays seem to be the main entomological themes in southern and central Queensland, although a few people have not been as lucky. **Graham White** (Toowoomba) returned from Christmas in England to the intricacies of a project proposal to Grains RDC, to pondering the State, national and international challenges to phosphine fumigation of grain and to continuing his update of extension material for grain storage.

Iain Kay (Bundaberg) visited New Zealand in January to recuperate after preparing several QFVG/HRDC project proposals (yes, on heliothis). He was excited to see a real, live, feral European wasp going about its business. The good citizens of Bundaberg submit for identification numerous *Polistes* and *Campsomeris* as "definitely European wasp" each summer so it was interesting to see the real thing.

Gordon Simpson (Toowoomba) returned from another relaxing tour of Europe in late October not really ready to commence work on his new cotton mirid project aimed at defining damage thresholds for the pest. However, he did, and trials on this work were completed by Christmas. Two new casuals grace the labs this season. **Tim Clarkson** and **Mark Weston** are both working on the damage threshold research and in the new year will test developmentally advanced insecticides for their effects on beneficial arthropods in cotton. **Richard Lloyd** and **Dave Murray** complete the team.

Hugh Brier (Kingaroy) visited **Gordon Simpson** and **Dave Murray** in December to discuss links with his new GRDC project "Integrating IPM for heliothis and other major pests of pulses, peanuts and soybeans". Hugh has been busy speaking on

insect management in pulse crops in a number of locations ranging from northern New South Wales to central Queensland. Pulse Australia ran a series of workshops from July to October. In October he also participated in workshops in Casino and Bundaberg. The workshop in Casino was organised by the Australian Oilseed Foundation (AOF) and investigated the potential for growing soybeans in rotation with beef cattle grazing. The potential for rotation cropping of soybeans with sugar cane was the subject of the Bundaberg workshop, and this was a joint initiative between AOF and BSES.

Richard Sequeira (Emerald) reports that heliothis pressure on early season cotton has been extremely high but fortunately dropped to lower levels during December. Unseasonal early rains impeded the harvesting of winter chickpea crops which acted as giant nurseries for heliothis that then migrated to cotton. Richard reports that the trap cropping program for heliothis management is widely accepted by the irrigated cotton growers. This program is the first step in the development of an IPM-based area-wide strategy for heliothis management. Development of the strategy is driven by the urgent need for effective control measures for heliothis, as the control situation is critical. However, as in many other districts, more progress could be made if more resources were available.

Melina Miles, formerly with Agriculture Victoria in Horsham, joined the DPI heliothis team in Toowoomba in early January. She is busy acclimatising to living in the clouds in Toowoomba and to a hot Darling Downs summer. She is working on the "Regional Management of heliothis on the Darling Downs" project co-funded by GRDC and CRDC. The project team, which includes **Dave Murray**, are running two study areas involved in the regional management of heliothis on the Darling Downs. Chick pea trap crops have been ploughed down eliminating densities of up to 100 larvae per metre of row. That's a lot of grubs. Cooperating growers had planted 1% of their total cropping area to the trap crop using seed sponsored by Rhône-Poulenc Rural Australia. Interestingly, Dave also reports that BT and tons of milk powder (yes milk) are being sprayed on crops to assist in control of heliothis.

Even **Frank Page** (Applethorpe) is in heliothis mode. Frank reports that heliothis damaged stonefruit and apples on the Granite Belt in spring

and early summer. Further releases of a wasp parasitoid for the biological control of grapevine mealybug have been made. While numbers of the wasp have been recovered on tree trunks and several unidentified parasitoids have been collected, economic control of the mealybug has not yet been achieved.

Greg Daglish and **Pat Collins** (Indooroopilly) were in China in October as part of an ACIAR project on resistance to the grain fumigant phosphine, and to attend the 7th International Working Conference on Stored-Product Protection. Conference papers covered a wide range of topics including chemical and biological control, resistance, insect biology, engineering, and quarantine. Their travels took them to Chengdu in Sichuan Province and Zhengzhou in Henan Province and finally Beijing where they teamed up with recently retired **Merv Bengston**.

New Zealander **Kees van Epenhuijsen** from the Institute for Crop and Food Research at Palmerston North spent several days in November at Indooroopilly with **Pat Collins** and his team. One of Kees work areas is stored product entomology and the aim of his visit was to discuss research methods and grain IPM in Australia.

Several of the southeast entomologists attended a workshop on IPM in greenhouse crops, held in Brisbane in late January. The workshop was one of a series being held throughout Australia and it featured speakers from England, Canada, USA and the Netherlands as well as **Stephen Goodwin** from NSW Agriculture.

As part of his retirement effort ex DPI into **Rod Elder** (Rockhampton) is preparing DPI Notes on all the pests of all the fruit and field crops in Queensland with the help of the relevant DPI Entomologist. **Tonia Loughrey** is doing the vegetable ones. The DPI Notes present current knowledge on IPM relevant to Queensland for each pest. The Notes are written to a set of headings. They give the description of the pest, its lifecycle, host range and information on its management. The insect pest management information is derived from two DPI publications: "Managing insects and mites in horticultural crops" and "Managing insects and mites in field crops, forage crops and pastures". There are one or more coloured pictures of the insect and/or its damage in each Note. More than 70 DPI Notes have been prepared thus far. (With a retirement like this who needs work!)

Rod's DPI Notes will progressively be placed on the DPI's Home Page on the world wide web (<http://www.dpi.qld.gov.au/dpinotes>). They will also be published on the DPI's Prime Notes CD-ROM Version 7.2 due for release in September 1999. The Prime Notes CD-ROM is published by DPI and is an Australian collection of fact sheets with content provided by nine State Government Departments, Centres, Information Organisations and Research and Development Corporations. The CD-ROM is available at DPI Information Centres and can be purchased from the DPI.

Iain KAY
Regional Councillor

Tony Clarke, SEQ local councillor, apologises for the absence of a regional report this month. "Over the Christmas/New Year period I finished my contract at the University of Queensland and began work with Prof. **Dick Drew** at Griffith University. I only got back on line on the 22nd of January, the closing date for this *Myrmecia* issue. So, local contacts, look out for me requesting stories for the next *Myrmecia*."

SOUTH AUSTRALIA

The University of Adelaide Department of Applied and Molecular Ecology

Following a reorganisation in the Faculty of Agricultural and Natural Resource Sciences, the Department of Crop Protection has amalgamated with several research groups from the Department of Environmental Management to form a new Department of Applied and Molecular Ecology, with **Otto Schmidt** as Head of Department.

The new Department is involved in the science and management of organisms in natural and agricultural ecosystems. Research strengths include the application of molecular and diagnostic technologies to unravel biological interactions at the cellular and population level and the use of computer models for environmental management. These fundamental studies are supplemented by a wide variety of research programs that deal with the biology and ecology of organisms and selected roles of humans in the functions of ecosystems.

The Department covers four major teaching disciplines in areas of entomology, plant pathology, weed sciences and applied ecology. To better understand the biology and dynamics of relevant organisms in the field the Department has

designed courses that introduce complex interactions and teach an integrated approach to the management of damaging organisms. The main teaching disciplines can be described as integrated management of pathogens, insects, vertebrates and weeds, and ecosystems management.

Research interests include:

- * conservation biology and ecological modelling
- * molecular biology and physiology of diseases of plants caused by bacteria, fungi, nematodes, viroids and viruses.
- * molecular biology, biochemistry and management of resistance against pesticides and herbicides in insects and plants
- * molecular biology, behaviour, systematics and population genetics of insect parasitoid-host interactions used in biological control programs
- * ecology and population genetics of symbiotic and pathogenic plant-microbe interactions
- * biodiversity of insects, plants and plant pathogens.

In the first few weeks of the year, **Gary Taylor** has completely reformatted the new departmental website. Anyone with bookmarks to the old Crop Protection homepage are asked to change them to the new AME site. The new website address is <http://www.waite.adelaide.edu.au/AME/>.

A large contingent of staff and students from the department attended the 4th International Hymenopterists Conference in Canberra, 6-11th January. **Andy Austin** (Convenor), **John Jennings** (Organising Committee), **Mike Keller** and **Otto Schmidt** (Session Chairs) and **Markus Beck** and **Uli Theopold** all presented papers. **Markus Beck** (Postgraduate student in **Otto Schmidt's** lab) won the prize for the best student presentation entitled "Two co-existing reproduction strategies in parthenogenetic wasp populations", and **Nick Stevens** (Honours student in **Andy Austin's** lab) won the prize for the best student poster entitled "Systematics and biology of micro-flea wasps, *Baeus* spp. (Hymenoptera: Scelionidae) in Australia". **Dongmei Li** (a new Postgraduate student in **Otto Schmidt's** lab) and **My-My Huynh** (Honours student in **Andy Austin's** lab) also attended. **Gary Taylor** took the opportunity to travel to Canberra with the conference delegates to visit **Peter Cranston**, ANIC to examine the three drawers of unsorted *Fergusonina* eucalypt gall-fly material. While there, he discovered a collection of hymenopteran

parasitoids, all taken from *Fergusonina* galls in the 1930's, which up until now were presumed lost.

Valerie Kempster attended the joint meeting of American Phytopathological Society and the Entomological Society of America in Las Vegas, Nov 8-12, where there was a joint session on induced resistance to insects.

Congratulations are due to both **Sassan Asgari** who was awarded an ARC Fellowship and **Gary Taylor** for an ARC Strategic Partnership with Industry (SPIRT) Postdoctoral Fellowship. Sassan's project is "Cell surface-mediated inactivation of insect blood cells by a polydnvirus-encoded immune suppressor" and Gary will be working on the "Potential use of fergusoninid flies and associated nematodes for the biocontrol of *Melaleuca quinquenervia*", with a field component based at the USDA Biological Control labs in Brisbane. **Otto Schmidt** received ARC SPIRT funding for the project, "Cell surface-mediated inactivation of insect blood cells by a polydnvirus-encoded immune suppressor".

Andy Austin received a Large ARC grant for the study of "Morphological and molecular systematics of doryctine wasps: parasitoids of beetle larvae". Recipients of the Small ARC grants scheme for 1999 include **Uli Theopold** for his project, "The importance of glycosylation in insect immunity and development", **John Jennings** and **Andy Austin** on "Host utilisation in aulacid and gasteruptionid wasps", **Andy Austin** and **Otto Schmidt** for their project "Co-evolution of the polydnvirus-microgastrine wasp association" and **Otto Schmidt** for "Biological mechanism of two co-existing reproduction strategies in parasitic wasp populations".

The department welcomes new Honours students, **Peter Crisp** who will be working with **Rick Roush** and **Peter Bailey** on "Movement and persistence of introduced phytoseiid mites, *Galendromus occidentalis* and *Phytoseiulus persimilis* in dry sclerophyll woodland", **Richard Glatz** (project title to be advised) and **Catherine Paull**, who will be working with **Mike Keller** on "Elucidating the biology and behaviour of the predatory mite *Anystis* sp. with a view to understanding factors which affect the specificity of predators of *Halotydeus destructor*, the red legged earth mite".

Annette Reineke started as a postdoc funded by the German Research Council. She did her PhD at the University of Hohenheim (Stuttgart)

working on the genetic diversity of a lepidopteran population. In Adelaide she will be working on *Venturia canescens*, where she wants to analyse maternal protein secretions at the molecular level. She is accompanied by **Gerhard Kubach**, who has a PhD in Entomology (working with beetles), and is presently on leave from a tenured position in a Government Environmental Assessment and Planning Agency. He is interested in doing environmental projects on the newly acquired Buckby Lands of the University.

Dongmei Li, who has been with the department as a Visiting Research Scientist in **Otto Schmidt's** group will commence a PhD program in February on "Genetic and molecular studies of the parasitoid, *Venturia canescens* and its host, *Ephestia kuehniella*".

In December, entomologists from Adelaide University, SARDI Entomology and South Australian Museum congregated at the British Hotel for the annual luncheon of the local members of the Entomological Society.

SARDI Entomology Unit

Glenys Wood, an Adelaide graduate, has joined the Unit to work on European wasp for the next three years. Glenys will work with **Dennis Hopkins** to improve baiting techniques so that they can be used in situations where it is difficult to locate the nest. This project is part of a larger research program on the wasp which is a joint initiative between SARDI and the University of Adelaide.

Ken Henry and **Dennis Hopkins** had a major involvement in a grasshopper control campaign (*Austroicetes cruciata*) conducted by the SA Government. The program ran from late September through to late November and was one of the largest aerial spraying exercises ever conducted in the country.

Flinders University Biological Sciences Social Insect Group

Research in the social insect lab was put on hold for the latter part of 1998 as we geared up for the 13th International Congress of International Union for the Study of Social Insects (IUSSI). The congress attracted 480 delegates, most from overseas, and was blessed with fine Adelaide weather. The lab is now gradually returning to normal.

After four months sabbatical at Flinders

investigating *Nothomyrmecia macrops*, **Seigo Higashi** and his student **Hiro Miyata** have returned to Hokkaido. **Bill Wcislo** from the Smithsonian Tropical Research Institute is currently visiting for collaborative work with **Mike Schwarz**, **Adam Cronin** and **Nick Bull**. Other visitors for 1999 include **Vincent Dietemann** from Würzburg, working on *Myrmecia* species, **Gerald Moritz** from Halle and **Tom Chapman** from Simon Fraser University, both working on thrips, and **Dan Bean** from Imperial College who will be discussing fig wasps with **Mike Schwarz** and **John Zammit**.

SA Water Australian Water Quality Centre

At the Australian Water Quality Centre the Monitoring River Health Program staff keep plodding through the samples. Autumn 1997 will be finished by the time this newsletter is published. Only about 750 macroinvertebrate samples from 1997 and 1998 to go; and 150 new sites to be visited this year. The streams of South Australia will certainly be well surveyed by the end of this year. The new area to be visited this year is to the west of Lake Eyre where several permanent waterholes are found on the mostly dry watercourses.

Paul McEvoy and **Chris Madden** recently participated in the Scientific Panel for the Determination of Environmental Flows in the Wakefield River to put the bug point of view. The Gawler River system will have a similar workshop in March and the Broughton River is to be examined later in the year. Invertebrates, along with fish, are the main biological indicators being considered when setting minimum flow requirements. **Daria Schulze**, **Peter Schultz**, **Rob Walsh** and **Sam Wade** will be attending the taxonomic workshop in Albury in early February to bring us news of the latest considerations on this year's aquatic groups. **Vladimir Tsymbal** and **Tracy Venus** have to stay chained to their microscopes looking for new records for SA, such as *Symphitoneuria wheeleri*, a salt loving caddis-fly that we have found to be widespread on Eyre Peninsula.

Gary TAYLOR and Paul DANGERFIELD
Regional Councillors

TASMANIA

Forestry Tasmania

Jane Elek attended both Brisbane conferences, presenting a paper on the pros and cons of Bt, and **Dick Bashford** attended the Society meeting, co-authoring a poster with **Sue Baker** on the potential of coccinellids as biological controls for eucalyptus beetles. **Luke Rapley**, an Ag. Science student from Tas University and **David Forrester**, a Forestry student from ANU, augmented the entomology team over the summer trapping insects in several *E. nitens* plantations. **Dick Bashford** had a busy spring, attending the CHAEC meeting preceding the Society meeting with **Margaret Williams** (DPIWE) and then was invited to attend the *Sirex* workshop in October in Curitiba, Brazil; he then jetted back to Brisbane with **Humphrey Elliott**, **Tim Wardlaw** and **Dave de Little** (North Forest Products) in November for the joint Research Working Groups 7/8 meeting which included the simulation exercise for the generic incursion management plan for forest pests and diseases developed by **Peter Gadgill**, NZ. **Humphrey Elliott** et al.'s book (Insect pests of Australian forests: ecology and management) is finally in print but must be ordered directly from the publisher (Inkata press).

North Forest Products

Tas Uni Ag. Science student, **Georgie Brown**, is working during the summer vacation with **Dave de Little** at North Eucalypt Technologies. Their main project is studying the life cycle and damage caused by *Heteronyx* spp. (Scarabaeidae: Melolonthinae) to newly planted Eucalyptus nitens seedlings. **Dave de Little** had a visit in November from two entomologists from the Regional Museum of Natural Science, Turin, Italy. **Mauro Daccordi** collected Chrysomelidae and **Pier Mauro Gauchino** collected Carabidae in NW Tasmania.

Department of Primary Industries, Water and Environment (DPIWE, formerly DPIE)

Margaret Williams and **Paul Rapley**, to name a few, are celebrating, after over 10 years of hard work, that Japan has finally agreed that Tasmania can deliver 'clean green' apples. To emphasise the point, a workshop on "Recent advances in apple pest and disease management" was held in the Huon Valley in January, addressed by **William (Bill) MacHardy** from the University of New

Hampshire. Bill is an internationally recognised authority on the disease of apples called apple scab or black spot. It is his third visit to Australia sponsored by Australian Apple and Pear Growers Association and Horticultural Research and Development Corporation. In addition there were six interstate speakers (**Paul James**, SARDI, **Graham Thwaite**, NSW Agriculture, **David Williams** and **Robert Holmes**, Agriculture Victoria, **Shane Dulhide**, QDPI and **Richard Vickers**, CSIRO) at the workshop as well as many local entomologists and managers.

University of Tasmania, Department of Agricultural Science/ Resource Protection Program at the CRC for Sustainable Production Forestry.

Geoff Allen, **Marina Hurley** and **Tara Simmul** all attended the September/October Brisbane conferences and all of the CRC entomology group went to Burnie in late October for a gathering of over 100 researchers involved with Sustainable Forestry at the University's new NW Tasmania facilities. Both **Geoff Allen** and **Zoltan Lukacs** presented research findings at that meeting. A successful workshop on Autumn Gum moth, *Mnesampela privata*, organised by **Dick Bashford** for the CRC at Mildura in August, was well attended with industry and research entomologists from every state, including **Dick Bashford**, **Jane Elek**, **Dave de Little**, **Zoltan Lukacs** and **Geoff Allen** from Tasmania. **Luke Rapley** was awarded first class honours for his project on Autumn Gum Moth diapause and feeding preferences. He is currently working on leaf beetles for Forestry Tasmania and has accepted a University Scholarship to undertake a PhD in forest entomology. Three other PhD students are also to start later this year, with **Anthony Rice** (James Cook University) and **Helen Nahrung** (Alan Fletcher Research Station/Uni Qld) to undertake projects in forest entomology and **Katrina Potter** gaining a dairy scholarship (DDRC) to work on factors influencing the efficacy of ragwort biocontrol in collaboration with **John Arisen** (Tasmanian Institute Agricultural Research (TIAR)) and **Geoff Allen**. Undergraduate students working in entomology over summer include **Georgie Brown** with North Forests at Burnie and **Sarah Campbell** with **John Arisen** at TIAR at Newtown, who all, along with **Jamie Davies**, will begin honours in entomology next year. Visitors who

have given seminars over the last few months have included **Anne Svedrup-Thygeson** from Norway (NORSKOG and Oslo University) on dead wood dependent beetles and **Mark Scriber** (Michigan State) on hybrid zone ecology. Also spotted enjoying a leisurely Saturday breakfast at Salamanca markets was **David Yeates** (Uni Qld) who had just completed a successful collecting trip in Tasmania. **Brendan Murphy** from University of Canterbury/NZFRI has been extremely productive collecting chrysomelids and the egg parasitoid *Enoggera nassau* all over the state in anticipation of eventually releasing a new strain in NZ to control the introduced *Paropsis charybdis*. **Brad Howlett** has become a recluse in the final agonies of writing up his PhD thesis on chrysomelid oviposition strategies. On a sad note for those at the CRC, **Tara Simmul** has departed for Perth (WA) to join her husband and is currently sweating it out in the unaccustomed heat, writing her PhD thesis from afar. **Zoltan Lukacs** is in the final stages of writing up his PhD project on the phenology of the autumn gum moth *Mnesampela privata*, a sporadic pest of young blue gum plantations in southern Australia. Keep an eye out for a thesis abstract in the Australian Journal of Entomology some time during 1999. For fellow phenology enthusiasts out there, pupal diapause and pupal aestivation are the primary mechanisms used to regulate the phenology of autumn gum moth. Pupal diapause maintains a univoltine life-cycle throughout the distribution of the species, while aestivation provides a means to extend the pupal stage until Autumn in warm regions.

Tasmanian Museum and Art Gallery

Roger Buttermore was recently seen on the ABC news promoting his work on bumblebees and appealing for more funding to assess its threat to native pollen feeders. I suppose bumblebees almost fall into the soft furry category and so will attract public sympathy.

Jane ELEK
Regional Councillor

VICTORIA

IPM Technologies

At IPM Technologies, **Paul Horne** and **Cindy Edward** have been very busy monitoring a range of crops to help farmers adopt IPM and at the same time studying vectors of different vegetable

diseases. This season has been very different to previous years with a sustained build-up of looper caterpillars (*Chrysodeixis argentifera*) causing problems in many crops. In addition to the agricultural work they have continued working on invertebrates in native grasslands and using selected insects in environmental assessment work.

Agriculture Victoria, Institute for Horticultural Development, Knoxfield

David Williams has been busy developing National Guidelines for Integrated Fruit Production for Apples. The draft guidelines were launched at the Australian Fresh Fruit Company (AFFCO) In-season Ball on 16th January. The draft guidelines are being circulated to all apple growing regions in Australia and to research and extension people involved with apples to get feedback. If you want a copy contact David on 03 9210 9222.

E.E. Muir & Sons have employed three crop scouts who are working in Cranbourne and Werribee for specific growers of brassicas and lettuce. This is a significant step forward in the commercial implementation of crop monitoring in Victoria. **Nancy Endersby** and **Peter Ridland** (Agriculture Victoria, Knoxfield) have assisted with the scouts' training as part of the national project "Advancing the integrated management of diamondback moth (DBM) in crucifer vegetables".

Ary Hoffmann was a keynote speaker on "The Genetics of Insect Adaptation to Environmental Stresses" at the European Science Foundation conference in Paris in January. **Ary Hoffmann** and **DeAnn Glenn** will be cosupervising two new post-graduate students at La Trobe University starting in Feb/March this year - **Martina Barnard** (eriphyid mites in grapevines) and **Angela Corrie** (phylloxera in grapevines).

There have been more than 1000 participants over the past 3 seasons in the IPM Viticulture: Research to Practice workshops held in grapegrowing regions throughout Australia. These workshops were developed by the Education & Training and IPM Fruit Teams at the Institute for Horticultural Development. Participation of researchers in the development and delivery of the workshops has helped to encourage viticulturists to implement research outcomes in their pest management strategies.

More than 150 people attended the Victorian

Workshop on IPM in Greenhouse Crops held at the Institute for Horticultural Development at Knoxfield on 29 January. Overseas speakers included **Don Griffiths**, **Les Wardlow**, **Mike Parella**, **Karel Bolckmans** and **Graeme Murphy**.

Alexandre Il'ichev participated in a number of international conferences in Europe in August and September 1998 as well as taking a study tour through Italy. He was investigating area wide mating disruption for Oriental Fruit Moth (OFM). In Italy OFM is a major pest in pears and apples due to OFM migration from stone fruit. Collaborative investigations of population differences between Italian and Australian OFM researchers, especially in sex pheromone structure and behaviour could be very useful for predicting the changes in biology of this very important pest.

DeAnn GLENN
Fiona CLISSOLD
Regional Councillors

FASTS NEWS

Federation of Australian Scientific and Technological Societies.

Prime Minister's Science Council

Under John Howard, the PM's Science Council (PMSEIC) has developed into a major force in discussing the S&T questions of the day. The meeting on December 4 brought together senior scientists and half of Cabinet, and the group discussed a whole range of issues over dinner and more formal talks the following day.

Issues for discussion included:

- * funding of medical research
- * the future of the ARC
- * training and encouraging entrepreneurial scientists and technologists
- * the supply of qualified science and mathematics teachers
- * measures to counter increased salinity

It is a major priority of FASTS to make constructive contributions to these discussions, and I try to take full advantage to ensure the voice of 50,000 working scientists and technologists is heard!

The meeting gave me an opportunity to meet Minister **Nick Minchin**, with his portfolio responsibility for Industry, Science and Resources; and to discuss the ARC issue with Education Minister **David Kemp**. As joint Chair of the PMSEIC sub-committee on dryland salinity, I

presented our report on salinity. I was able to consult widely within the scientific community before writing the report, and included actions on remedial programs Australia needs to put in place.

The presentation generated a lot of discussion, which reflects the care the Minister and Chief Scientist **John Stocker** take in selecting topics of relevance and interest to the Ministers in attendance.

Wills Report on Funding Medical Research

Peter Wills's report to PMSEIC report makes a strong argument for increased investment in R&D for the medical sector and shows the returns in terms of both innovations and cheaper health costs. It makes a cogent case for only funding excellent research through peer review processes. The full report was released on December 4 and is available on the Web (<http://www.hmrsr.com>)

ARC at PMSEIC

The Wills' recommendations on the selection of scientific projects through peer review made an interesting contrast with rumours about the content of the draft green paper on the ARC at the PMSEIC discussions. Minister Kemp told me he had received the letter from FASTS on ARC, and said that there were strongly divergent views on the matter. The draft Green paper may be delayed, but I indicated FASTS was keen to see the discussion paper address the real issues and would not object to a delay if it means more appropriate consultation.

Teachers

The issue of the supply of qualified science and mathematics teachers was also discussed at PMSEIC. It is clear that this matter is beginning to bite with our politicians, and there is an increased awareness that relatively low pay levels make teaching an unattractive career. These issues are to be raised further with Minister Kemp and will be discussed at a subsequent PMSEIC meeting.

Ten Top Issues

FASTS' Ten Top Issues was released just before the New Year and their selection and ordering caused headaches among Board and Executive Members. There was certainly no lack of issues! The difficulty lay in weighing and balancing the relative merits of matters like better funding for universities and the need to preserve a

competitive, peer-reviewed system for selecting basic research projects.

FASTS' Annual Council

Council this year was held at the National Press Club and I was delighted to see so many Member Societies represented by their Presidents. Discussion ranged over a number of policy issues, including the commercialisation of science and the future of the ARC. **Bob Frater** of CSIRO and **Bob McMullan** (ALP spokesperson on Industry and Technology) addressed the meeting, and **Toss Gascoigne** gave a preliminary report on a FASTS' study on the impediments scientists and technologists face in commercialising their science. Dinner guests included Professor **Vicki Sara** (Chair of ARC), **Stuart Hamilton** (Director of AV-CC) and Professor **Brian Anderson** (President of Australian Academy of Science).

President-elect Professor Sue Serjeantson

I am delighted to announce that **Sue Serjeantson** has been elected President-elect of FASTS, and will take up office at the Council in November 1999. Sue has a distinguished career in research and research administration. A molecular biologist, she served as Director of the Institute of Advanced Studies, and Deputy Vice-Chancellor at the ANU.

The full Executive is:

President

Prof. Peter Cullen (CRC Freshwater Ecology, Uni of Canberra)

President-elect

Professor Sue Serjeantson (ANU, Canberra)

Vice-presidents

Ms Jan Thomas (Victoria University of Technology, Melbourne)

Dr Bob Carter (James Cook University, Townsville)

Secretary

Dr John Rice (Flinders University, Adelaide)

Treasurer

Prof. Snow Barlow (Bureau of Resource Sciences, Canberra)

Chair of Policy Committee

Dr Ken Baldwin (Laser Physics Centre, ANU, Canberra)

Board Members:

Chemistry

Dr Alan Arnold UNSW, ADFA Canberra

Plants and Ecology

Prof. Snow Barlow, Bureau of Resource Sciences, Canberra

Mathematical Sciences

Dr Noel Barton CSIRO, Sydney

Aquatic Sciences

Dr Alan Butler CSIRO Hobart

Earth Sciences

Dr Bob Day Consultant, Brisbane

Biological Sciences

Dr Peter French, St Vincent's Hospital, Sydney

Physical Sciences

Prof. John Pilbrow, Monash University, Melbourne

Medical Sciences

Prof. David Tracey, University of NSW, Sydney

Impediments to Commercialisation

The FASTS' study on the impediments scientists face in commercialising their work has involved talking to scientists across Australia in focus groups in Townsville, Brisbane, Sydney, Melbourne, Canberra, Adelaide and Perth. An interim account was presented to a Research Commercialisation Forum in Melbourne (as well as to FASTS' Council); and showed many scientists find the road to commercialisation is a difficult one. The project is funded by a grant from the Department of Industry, Science and Resources, and the full report is due by the end of the year.

Meetings of State and Territory S&T Groups

Representatives from all States and Territories (and NZ) met in Canberra last August to discuss the scientific priorities within their jurisdictions. I played a dual role at the meeting, as a member of the ACT Science Council and President of FASTS. FASTS considers that science should be a part of government thinking at all levels and sees these discussions as important promotions for S&T nationally. We were happy to assist with the planning of the meeting.

FASTS in Nature

An account of the ARC issue appeared in the journal *Nature* this week and featured FASTS' letter to Minister Kemp. Another illustration of the deep commitment scientists internationally have to the peer-reviewed process! 1998 was another challenging year for those involved in science and technology with continuing financial stresses and many of our institutions being the subject of

review. I hope 1999 is a more settled year.

Peter CULLEN
President, FASTS

FASTS TEN TOP POLICIES for 1999

1. UNIVERSITIES AT THE CROSSROADS

FASTS urges the Government to restore stability in the higher education sector through realistic annual salary indexation to help meet negotiated salary increases and through realistic annual indexation of infrastructure costs that recognises the impact of the exchange rate on library acquisitions, information technology and purchases of major equipment.

2. PEER-REVIEW FUNDING: THE BEST WAY TO GO

Australia must retain a nation-wide competitive, peer-reviewed process as part of a plurality of research funding mechanisms. The ARC should be independent like the NHMRC and its budget increased to allow more top-ranked science projects to be funded.

3. INCENTIVES FOR SCIENCE AND MATHS TEACHERS

The shortage in qualified teachers of science and mathematics will worsen unless good quality graduates are attracted to the profession by incentive schemes such as delayed or reduced HECS repayments. Universities need incentives to provide extra teacher-training positions.

4. SCIENCE IN THE BUSH

S&T can help create new jobs in regional Australia in industries such as aquaculture, wine-making and biotechnology as well as coping with salinity and other environmental issues. These matters need an "all-of-government" approach with the active participation of regional governments.

5. AUSTRALIA: AN ATTRACTIVE PLACE TO INVEST

FASTS urges the Government to introduce internationally competitive R&D tax concessions and capital gains taxes. These would support our highly skilled work-force and the relatively low cost of research to make Australia a very attractive place in which to invest in science and technology.

6. KEEPING UP WITH THE JONESES

Government support for R&D should be viewed as an investment rather than a drain on the public purse. Both Britain and America have sharply increased their spending on research and Australia should follow this lead by investing in our future prosperity through increased funding for R&D.

7. INVESTING IN AUSTRALIA'S HEALTH

FASTS applauds the major recommendations of the Wills Review into Health and Medical Research and urges government, research and industry to work together to implement its recommendations to improve the delivery of health and medical research in Australia.

8. SCIENTISTS THINKING COMMERCIALY

Universities and research agencies should offer real incentives and encouragement to scientists to commercialise their work. Commercial activities should be recognised as a valid professional activity in promotion and appointments and existing training and assistance programs improved.

9. THE BENEFITS OF BEING INTERNATIONAL

The Government is urged to build Australia's international science links by investing in reciprocal projects such as the Global Biodiversity Information Facility and capturing potential flow-on benefits in emerging technologies such as biotechnology and information sciences.

10. LANDMARK PROJECTS TO MARK 2001

FASTS invites the Government to capture the imagination of all Australians with landmark S&T-based projects to mark the Year 2001. These projects should create high-quality employment opportunities and could include national research investment in Australia's Ocean Territory.

ELECTRONIC NEWS

Change of Website Address

The former Dept of Crop Protection, Waite Campus, University of Adelaide has recently amalgamated with several research groups from Dept of Environmental Science and Management, Roseworthy Campus to form the new DEPT OF APPLIED AND MOLECULAR ECOLOGY. Anyone with bookmarks to the old Crop Protection homepage are asked to change them to the new AME site. The new website address is:
<http://www.waite.adelaide.edu.au/AME/>.

COMING EVENTS

Australian Entomological Society 30 AGM

and Scientific Conference

28 September - 2 October 1999

Australian National University, Canberra

The 30th AGM and Scientific Conference of the Australian Entomological Society will be held at the Australian National University, Canberra from Tuesday 28 September to Saturday 2 October 1999.

The theme of the conference is "Insects in the Australian Environment". To that end, a number of symposia and sessions is planned including:

- Insects of the arid zone
- Insects as biological indicators
- Insect conservation
- Exotic incursions and quarantine
- Biological control
- Entomainment
- General entomology

Please contact **Glynn Maynard** with further suggestions or enquiries at:

glynn.maynard@aqis.gov.au

The conference is being organised by Australian Convention and Travel Services Pty Ltd. For general enquiries, please contact:

Anette Palm

Telephone: (02) 6257 3299

Facsimile: (02) 6257 3256

Email: conf@ausconvservices.com.au

Website: http://www.ausconvservices.com.au

Glynn MAYNARD

Convenor

30th AGM and Scientific Conference

COURSE ANNOUNCEMENT

Biology of Disease Vectors

Venue: Manaus (Amazon), Brazil

Date: July 11-24, 1999

The worldwide toll in human suffering and death caused by arthropod-transmitted diseases is immense. Mosquito-transmitted malaria alone accounts for about 2 million deaths per year, mostly African children under 5 years of age. Resistance of parasites to drugs, resistance of arthropods to insecticides and the present unavailability of vaccines to many of the vector-borne diseases all underscore the

importance of searching for alternative means of control. To date, relatively little importance has been given to the study of arthropod vectors of disease. In particular, knowledge at the molecular level of how parasites and viruses interact with their arthropod hosts is substantially lacking. These deficiencies are compounded by the paucity of scientists trained in this field, diversion of public health funds to diseases considered to be more important and lack of interest by the pharmaceutical industry to develop new tools to combat vector-borne diseases. The course "Biology of Disease Vectors" originated from the recognised need to rejuvenate and expand the field of vector biology. It has been offered every year since 1989. A principal aim of the course is to incorporate cutting-edge molecular biology and genetic approaches into this research area in order to develop new and efficacious strategies for the control of vectors and vector-borne diseases.

Additional objectives are:

- 1) To provide common background, training and conceptual framework for the development of a new generation of experts in vector-borne disease;
- 2) Recruit scientists from other disciplines into the field of vector biology and
- 3) To establish a network of individuals working in vector biology in order to facilitate collaborative investigations and enhance progress in the field.

The course will last 2 weeks and will consist of lectures, laboratory exercises and a field trip. About half of the course will be dedicated to the study of vectors in general with emphasis on recent discoveries. A field trip and laboratory exercises on vector classification (using classical and molecular techniques) will also be scheduled.

The second half of the course will be dedicated chiefly to the study of the role of vectors in the transmission of specific diseases such as malaria, Chagas, Leishmaniasis, Dengue, Yellow Fever, etc. The course is intended for molecular biologists, molecular geneticists, biochemists, etc. working in unrelated research areas who contemplate becoming involved in vector research. It is also intended for scientists with more conventional training in vectors and vector-borne diseases. The course is recommended for advanced graduate students, postdoctoral fellows and independent investigators. Scientists from countries where vector-borne diseases are prevalent are specially encouraged to apply.

Persons with purely administrative posts are usually not selected. Small class size comprised of about 30 selected international students and about 25 world-renowned faculty provide an unparalleled learning experience. All classes will be conducted in English.

An application form and a copy of this announcement can be found at the following address:

<http://mediswww.meds.cwru.edu/dept/genetics/bdvcourse/>

If unable to apply electronically, or if further information is needed, please contact:

Dr Marcelo Jacobs-Lorena,
Case Western Reserve University,
School of Medicine,
Department of Genetics, 10900 Euclid Ave.,
Cleveland, Ohio 44106-4955, USA.
Tel: (216) 368-8749;
Fax: (216) 368-3432;
Email: bdvcourse@po.cwru.edu

Application deadline is February 26, 1999.

**National Workshop on
The Use of Environmental Management
Systems in Agriculture
Ballina, NSW
May 1999**

Details: *Myrmecia* 34(4): 33

Contact: Genevieve Carruthers:

Phone: 0266 261 237

Fax: 0266 283 264

Email: genevieve.carruthers@agric.nsw.gov.au

**SPRAY OILS
BEYOND
2000**

**Sustainable Pest and Disease Management
Sydney, Australia
25-29 October 1999
University of Western Sydney, Hawkesbury
and
University of Florida**

Details: *Myrmecia* 34(4): 33

First Notice and Call for Papers available from:
Alison Frost
Conference Secretary

Hawkesbury Technologies Ltd
UWS Hawkesbury
PO Box 415
Richmond, NSW 2753
Ph: (02) 4570 1690
Fax: (02) 4570 1520
Email: a.frost@uws.edu.au

**INSECT PATHOLOGY COURSE
30 March - 23 April 1999
CABI Bioscience**

Details: *Myrmecia* 34(4): 34

Contact and further information:

Mrs Stephanie Groundwater
CABI Bioscience UK Centre (Egham)
Bakeham Lane
Egham
Surrey, TW20 9TY
UK
Tel: 44-1784-470111
Fax: 44-1491-829100
Email: S.Groundwater@CABI.org

**SOCIETY OF AUSTRALIAN SYSTEMATIC
BIOLOGISTS
AUSTRALIAN SYSTEMATIC BOTANY
SOCIETY**

**Invertebrate Biodiversity & Conservation
Perth 1999 Joint Conference**

Details: *Myrmecia* 34(3): 22-23

**THE NEW PANORAMA OF ANIMAL
EVOLUTION "**

**The New (XVIII) International Congress of
Zoology
Athens, Greece
28 August-2 September, 2000**

Details: *Myrmecia* 34(3): 24

Contact:

Dr Rosa Polymeni
University of Athens
Department of Biology
Section of Zoology and Marine Biology
15784 Athens, Greece.
Tel. 30-1-7264364
Fax. 30-1-7284604
Email: rpolymer@biology.db.uoa.gr

URL http://www.york.biosis.org/zrdocs/new_icz.

**XIVth INTERNATIONAL
PLANT PROTECTION CONGRESS**



**Plant Protection Towards the Third
Millennium
Where Chemistry Meets Ecology
Jerusalem, ISRAEL
July 25-30 1999**

Details: *Myrmecia* 33(2): 24-25

Contact:

Congress Secretariat
XIVth International Plant Protection Congress
PO Box 50006
Tel Aviv 61500
ISRAEL
Telephone: +972 3 514 0000
Fax: +972 3 514 0077 or 517 5674
Email: IPPC@Kenes.com

was received.

If you need more information, please call
ice@sercomtel.com.br

Everything you could possibly want to know
about the next ICE is available on the Congress
Web Page <http://www.embrapa.br/ice>, including
details of accommodation, delegates, services,
associated activities, administrative matters,
sponsors, symposia, etc.

**7th AUSTRALASIAN CONFERENCE ON
GRASSLAND INVERTEBRATE ECOLOGY
Perth, Western Australia
September 1999**

Details: *Myrmecia* 34(2): 19

Further information:

John Matthiessen
CSIRO Entomology
Private Bag PO
Wembley
Western Australia 6014
Phone: 08 9333 6641
Fax: 08 9333 6646
E-mail: johnm@ccmar.csiro.au
Information also available at:
<http://www.agric.wa.gov.au:7000/Ento/ACGIE/>



**XXI International Congress of Entomology
Iguassu Falls, Brazil
20-26 August 2000**

Entomologists Preserving Biodiversity

Details: *Myrmecia* 34(1): 30-31.

CALL FOR PAPERS

We are now calling for papers for the XXI
International Congress of Entomology. The call will
be open from January 1st to December 31st, 1999.
Please refer to our homepage
(<http://www.embrapa.br/ice>) for instructions to
submit abstracts.

The organising committee should reply 15-30
days after you sent the abstracts. In case of no
reply, please call us to verify whether your abstract

ECONNECT COURSES

**1. Presentation Skills Workshop - Designed
especially for Scientists - LEARN HOW TO
MAKE A TALK WORK FOR YOU AND THE
AUDIENCE**

This practical two-day Workshop teaches you to:

- give presentations with confidence
- structure talks in a logical way
- better understand your audience
- present with style
- handle the unexpected question
- use visual aids to add impact

The aim of the Presentation Skills Workshop is to
help participants to communicate their message
effectively to a range of audiences. This two-day
Workshop is very practical and includes a number
of "speak on your feet" exercises with lots of tips
given for personal improvement. Participants
deliver "before-and-after" five minute presentations,
for individual feedback on strengths and
weaknesses. These presentations are video-taped.
Specific topics include:

- structuring and preparing an effective

- presentation
- framing the message
- overcoming nerves
- using body language, voice and gestures
- analysing the audience
- making the best use of audio-visual aids
- dealing with questions

2. Media Skills Workshops - Designed especially for scientists - LEARN HOW TO MAKE THE MEDIA WORK FOR YOU

This practical two-day Workshop teaches you to:

- give your message to the media with confidence
- practise your interview technique with working journalists
- get your message out as accurately as possible

The aim of the Media Skills Workshop is to help scientists to feel comfortable with the media and to control their media appearances. This two-day Workshop is highly practical and brings in working journalists from television, radio and newspapers. Improve your interview skills through practice sessions in front of the camera and microphone. Work with journalists to shape your story ideas into a format to interest media.

Specific topics include:

- answering questions from television, radio and newspaper journalists
- turning good science into good media
- making the big announcement
- knowing what to do when a journalist knocks on your door
- emphasising the important message
- handling the difficult questions
- organising a good media release

FOR BOTH WORKSHOPS:

For our scheduled workshops, the cost is \$545/participant. The cost of other workshops should be negotiated directly with Econnect. All our workshops include:

- comprehensive notes
- take away video tape of personal presentations
- individual feedback on presentations
- lunch and other refreshments (at scheduled workshops only)

Group size is strictly limited to allow participants maximum practical experience. Workshops generally run from 9.00 am until 5.00 pm on both days.

The Land and Water Resources R&D Corporation will provide support for scientists

working on their projects to attend these Workshops. Contact the Workshop organisers or Glenn Conroy, Phone: 02 6257 3379, Fax: 02 6257 3420, email: glenn@lwrrdc.gov.au for more information. Other R&D Corporations may also offer financial support.

The presenters

Toss Gascoigne and **Jenni Metcalfe** have backgrounds in journalism, science communication and education. They work in close daily contact with scientists and have been running these Workshops for seven years across Australia.

Exclusively for scientists and those involved in science, Econnect only runs Workshops for scientists, technologists and those involved in research or resource management. Our Workshops are especially tailored for these groups of people.

For further information contact:

Jenni Metcalfe
ECONNECT
PO Box 734
South Brisbane BC QLD 4101
Phone (07) 3846 7111
Fax (07) 3846 7144
E-mail jenni@econnect.com.au

Presentation Skills Workshop Dates - 1999

Melbourne - March 4-5
Adelaide March 22-23
Canberra - April 12-13
Sydney - June 21-22
Brisbane - September 13-14
Perth - October (Date to be confirmed)

Media Skills Workshop Dates - 1999

Adelaide - March 25-26
Canberra - April 15-16
Melbourne - May 11-12
Sydney - June 24-25
Brisbane - September 16-17
Perth - October (Date to be confirmed)

We run most of our Workshops under special arrangement with specific groups or organisations. If these dates or locations do not suit, please discuss your needs with the presenters.

NEW PUBLICATIONS

BOOK REVIEW

Murray. S. Upton (1997). A Rich and Diverse Fauna. CSIRO Publishing. 386pp. colour plates. Hardcover \$59.95.

It is a pleasure to be able to review a book which contains such a wealth of historical information on Australian entomology. The focus of the book, which is in keeping with Murray Upton as the author, is the evolution of the Australian National Insect Collection (ANIC). However, the book is much more, as Murray documents the history of the early years of the CSIR, the subsequent development of CSIRO, the appointment of entomologists who subsequently developed as taxonomists and have worked with the CSIRO entomological collections, their activities, both inside and outside the laboratory, as well as a wealth of information on the host of other entomologists who have been associated with CSIRO and the collection since the 1920's.

In keeping with Murray's character, the book is extremely well organised. The information is presented chronologically with considerable attention to detail in its preparation. It will become obvious to the reader the many hours Murray has spent on research for the book which must have involved the sorting of several mountains of archived material. His translation of divisional records and reports is amazing in that the book is a great read! Repeatedly Murray has extracted relevant detail from his source material to provide a context for activities and development in CSIRO which is sure to provide the reader with a deeper understanding of the entomological icons we know and recognise as CSIRO Entomology and the ANIC. In some instances, the level of detail is such that the reader will develop a familiarity with the personality and character of the entomologists, chiefs and researchers alike covered in this tome.

It is extremely interesting to note in the narrative the "applied" nature of entomological work in the early days. It is also wonderful to read how taxonomy was recognised as "the basis of biological research". In the fifth chapter, Murray commences his attempt to convince readers of the need for taxonomic investigations as demonstrated by history within the division of Entomology. This section may prove useful as an extract for distribution to ecologists and science managers!

The book moves on through the years

describing collecting and survey activities, once again enlightening the reader with detail of the people involved in these times. The reader is given an understanding of the path of development of the entomological collections, the wins and the losses and the developments in other institutions throughout Australia affecting this process. As readers, we are made aware of the background to the formal recognition of the entomological collections and changes relating to their significance in the context of "scientific heritage" of Australia (denoting a shift toward more emphasis on biodiversity, as we have more recently come to know the term).

But "that's not all" as the book does contain even more. I have not mentioned the time period associated with the author or his many achievements when working with the collections, all of which are documented. A comprehensive collection of photographs of staff associated with the collections over the years, a list of staff and associates and a bibliography of publications are included. The book is most informative, and will be very useful to have close to hand.

In summary, get your copy NOW!

John MACDONALD
NSW Agriculture, Orange

NOTICES

ScienceNOW! '99

ScienceNOW! '99 is seeking nominations for "Fresh Science" to be delivered daily at ScienceNOW! the National Science Forum at the Melbourne Exhibition Centre, 6 to 9 May 1999

We are seeking your assistance to identify the most exciting research of the past year for presentation as Fresh Science at ScienceNOW! '99. Fresh Science was a highlight of the first ScienceNOW! in May 1998, where 17 scientists in the early stages of their careers presented their research to the media and the general public. They were selected from more than 90 nominations, and their stories attracted national and international attention. There were more than 150 mentions of their work in the media.

In order to be eligible for Fresh Science '99, research must have been conducted in Australia or by an Australian, must have been released since 1 January 1998, must have gained peer recognition, and must NOT have had significant

media coverage. Successful candidates must demonstrate they can present to a general audience in an informative and interesting way.

Forms and detailed selection criteria will be available on-line from 1 February 1999 at the ScienceNOW! website:

www.asnevents.net.au/sciencenow, together with information on the 1998 Fresh Science sessions-presenters, media coverage etc.

Nominations for Fresh Science '99 will close on 31 March 1999.

We also welcome your participation in other sections of ScienceNOW! You may wish to:

- * organise a meeting or workshop to coincide with ScienceNOW! (rooms are available at the Melbourne Exhibition Centre);
- * participate in the major forums; or
- * exhibit at GASS-the Great Australian Science Show.

For further information visit www.asnevents.net.au/sciencenow or contact **Niall Byrne** on 03 5253 1391, fax 03 5253 1678, e-mail: niall@byc.com.au

EUROS NEEDED!

Plea One

Bob Matthews, CSIRO McMaster Fellow (see Plea Two) needs to be advised about any unusual or atypical Eurowasp nests anywhere in Australia (e.g., "monster" size, or known to have survived the winter into a second season, etc.). Persons knowing of such nests should either call Bob at 02 6246-4256 or email him at Robert.Matthews@ento.csiro.au. He is especially keen to have the opportunity to collect such nests for studies of colony composition, etc. and will remove such nests at no cost. His special interest in such nests relates to the origin of polygyny (multiple queens) and perennial nests from the usual condition of monogyny and annual nests.

Any help readers of *Myrmecia* can provide would be greatly appreciated.

EUROS NEEDED!

Plea Two

Bob Matthews, University of Georgia, Athens, Georgia, attended the Hymenopterists Conference and is now settling into his McMaster Fellowship research. He will be in the Division of Entomology in Canberra until June, working on the taxonomy of a genus of pemphredonines (Sphecidae), and also on the biology and genetics of the European wasp - *Vespa germanica*.

Part of this work involves collaborative genetic work with a post-doc in **Ross Crozier's** lab. For this, they need *V. germanica* workers preserved in alcohol (90% or greater if possible) from as many localities in Australia as possible.

Thus, he would like to solicit help from readers from those parts of Australia where this wasp is established. Specifically he needs a few workers (minimum 5) from any nest in alcohol. Be sure to provide date and locality information. If persons in a position to provide such samples would post them to Bob at Division of Entomology, CSIRO, P.O. Box 1700, ACT 2601, he would be very grateful. Email: bobmatthews@mailcity.com or phone (02) 6246 4256.

PhD Opportunity

The Departments of Environmental Management and Ecology (Albury/Wodonga) and Zoology (Bundoora), La Trobe University, seek applications for postgraduate studies leading to a PhD.

The successful applicant will undertake evolutionary studies on a major group of orthopteroids (grasshoppers). In the species *Acrida conica*, sexual dimorphism exists in which the female is larger than the male. There also exists green/brown polymorphism which is either genetically or environmentally controlled. No attempts have been made to integrate both sexual dimorphism and green/brown colour polymorphism in a cohesive life history strategy/model for grasshoppers. The oversight is significant, since examples of strong associations between grasshopper colour and grasshopper sex are

already described in some species, suggesting that size and colour are linked in determining the optimal life history strategy. An understanding of this relationship will elucidate the fundamental adaptive basis of both size and colour and offer explanations of several life history phenomena including rate of development, microhabitat selection, population structure and mating systems.

The successful applicant will:

- 1) conduct testing of the possibility of differential thresholds for colour change between the sexes using both laboratory and field experiments.
- 2) examine the relationships between colour, size, microhabitat selection and female fecundity in both the field and the laboratory and,
- 3) assess the influence of male size on survival and mating success in laboratory experiments.

The successful applicant will be expected to have a first class or upper second class honours degree in a biological subject and obtain his/her own scholarship.

Further information is available from Dr C. Meathrel (Albury/Wodonga - Ph 02 6058 3875, Fax 02 6058 3888) or Dr T. New (Bundoora - Ph 03 9479 2247).

Closing date for applications: 30 June 1999

THE AUSTRALIAN ENTOMOLOGICAL SOCIETY INC.

FORM OF NOMINATION FOR MEMBERSHIP

To be returned to:

Dr D.E. Walter, AES Secretary, c/o Dept. of Entomology
University of Queensland, QLD 4072

We the undersigned

Proposer:
(print name here) (signature)

Seconded:
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being financial members of the Society, propose the following for membership of The Australian Entomological Society Inc.:

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I accept nomination and undertake if elected to abide by the rules of the Society and to pay annual subscriptions by the date prescribed.

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For **1999**, new student/retired members - \$25.00; new full members - \$55.00. **Payment with nomination required.** (NB. These rates only apply for new memberships.

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